

WHAT IS CLAIMED IS:

1. A method of handling stored e-original objects that have been created by signing information objects by respective transfer agents, submitting signed information objects to a trusted custodial utility (TCU), validating the submitted signed information objects by at least testing the integrity of the contents of each signed information object and the validity of the signature of the respective transfer agent, and applying to each validated information object a date-time stamp and a digital signature and authentication certificate of the TCU, which handles at least one e-original object based on rules established by an owner of the at least one e-original object, comprising the steps of:

establishing a rule that establishes at least one type of e-original object;
establishing a rule that establishes at least one type of e-original object as potential transferable records;
establishing a rule that enables at least one selected user to access at least one selected type of e-original object;
establishing a rule that identifies at least one type of e-original object required to conclude a deal; and
establishing a rule that controls transformation of a selected e-original object into a transferable record.

2. The method of claim 1, wherein based on rules established by an owner of an e-original object requiring execution as part of concluding the deal, the TCU notifies at least one participant in the deal when the e-original object is received by the TCU.

3. The method of claim 1, further comprising the step of creating an object-inventory from at least one stored e-original object that is a transferable record and is required to conclude the deal, wherein the object-inventory includes a date-time stamp and a digital signature and authentication certificate of the TCU, and the object-inventory comprises a wrapper that includes object identifiers that respectively point to the transferable record and at least one signature block of at least one participant in the deal, the at least one participant's signature block comprising a hash of a combination of a master copy of the transferable record and the at least one participant's digitized signature.

4. The method of claim 3, wherein the object-inventory further includes metadata summarizing the deal.

5. The method of claim 1, further comprising the steps of:
5 receiving, by the TCU, a request from a user to retrieve content of an e-original object;
and
checking owner-established rules associated with the type of the e-original object identified in the request to determine whether the user has been enabled to access the type of e-original object identified in the request.

10 6. The method of claim 5, wherein the request indicates that the content is to be retrieved to add at least one signatures, and if the user has been enabled to access the type of the e-original object identified in the request, the TCU carries out the steps of:

stripping all signatures from the e-original object identified in the request, thereby
15 leaving only the content of the e-original object;

forming a wrapper that includes the content of the e-original object identified in the request, a current date-time indication, and the TCU's digital signature and authentication certificate, and

communicating the wrapper to the user.

20 7. The method of claim 5, wherein the user receives the wrapper and extracts the content for rendering by the user.

8. The method of claim 7, wherein the user prints the content.

25 9. The method of claim 7, wherein the user queries the TCU for parties who may have signed the e-original object corresponding to the content rendered by the user, and in response to the query, the TCU unwraps the e-original object, extracts any signer information included in the e-original object, forms a data structure comprising the signer information, and communicates
30 the data structure to the user.

10. The method of claim 7, wherein after rendering the content, a user forms a respective signature block from the content and the user's digital signature, commits to be bound by its digital signature, and submits the signature block to the TCU.

5 11. The method of claim 10, wherein the user's signature block comprises signer information that includes at least a hash of the content and the user's digital signature and certificate information.

10 12. The method of claim 11, wherein the signer information includes at least one authenticated attribute.

13. The method of claim 10, wherein a plurality of users submit respective signature blocks in parallel to the TCU.

15 14. The method of claim 13, wherein the signature blocks are stored by the TCU as recursively applied wrappers.

20 15. The method of claim 10, wherein the TCU extracts information from the signature block submitted by the user and, based on the extracted information, verifies an identity of the user and an integrity of the content used to form the signature block.

25 16. The method of claim 15, wherein the TCU verifies the integrity of content by computing a hash of the content and comparing the computed hash to a hash included in a signer information portion of the signature block.

30 17. The method of claim 10, wherein the content is submitted to the TCU, and the TCU retrieves the corresponding e-original object, unwraps the e-original object to retrieve the content of the e-original object, and forms a wrapper that includes the retrieved content, the submitted signature block, a current date-time indication and the TCU's digital signature and authentication certificate, whereby the wrapper comprises a new e-original object.

18. The method of claim 17, wherein the user's signature block includes an unauthenticated attribute field, and the TCU adds the current date-time indication to the

unauthenticated attribute field to indicate a time of receipt by the TCU of the user's signature block.

19. The method of claim 17, wherein a plurality of users submit respective signature
5 blocks to the TCU, and the submitted signature blocks are placed in at least one of a plurality of recursively applied wrappers.

20. The method of claim 17, wherein the TCU notifies the owner of the e-original object
10 corresponding to the content, based on a rule established by the owner, that the signature block has been included in the wrapper.

21. The method of claim 20, wherein the new e-original object is a transferable record
based on the established rules.

22. A method of handling stored e-original objects that have been created by signing
15 information objects by respective transfer agents, submitting signed information objects to a trusted custodial utility (TCU), validating the submitted signed information objects by at least testing the integrity of the contents of each signed information object and the validity of the signature of the respective transfer agent, and applying to each validated information object a
20 date-time stamp and a digital signature and authentication certificate of the TCU, comprising the following steps by the TCU:

receiving a request submitted by a user for retrieval of an e-original object identified in
the request;

determining whether the user has authority to submit the request; and

25 if the user is determined to have authority, carrying out the steps of:

retrieving the e-original object identified in the request;

extracting from the retrieved e-original object content information and at least
one signature block;

extracting from the signature block signer information;

30 extracting at least one of a date-time of a digitized signature included in the
signer information and a date-time of the TCU's receipt of the signature block;

extracting from the signature block certificate information that includes signer
identifying information;

forming a data structure from the extracted information such that upon rendering the content the information is properly placed with respect to the content and includes at least one forgery-resistant indicium that clearly identifies the rendered information as a copy; and

5 communicating the data structure to the user.

23. The method of claim 22, wherein the data structure is included in a wrapper that also includes a date-time indication and the TCU's digital signature and authentication certificate.

10 24. The method of claim 22, wherein the data structure includes tags that guide placement of the information.

25. A method of handling stored e-original objects that have been created by signing information objects by respective transfer agents, submitting signed information objects to a trusted custodial utility (TCU), validating the submitted signed information objects by at least testing the integrity of the contents of each signed information object and the validity of the signature of the respective transfer agent, and applying to each validated information object a date-time stamp and a digital signature and authentication certificate of the TCU, which handles at least one e-original object based on rules established by an owner of the at least one e-original object, comprising the steps of:

20 authenticating an identity of the owner;

establishing rules relating to a deal, wherein the rules include a rule that establishes at least one type of e-original object, a rule that establishes at least one type of e-original object as potential transferable records, a rule that enables at least one selected user to access at least one selected type of e-original object, a rule that identifies at least one type of e-original object required to conclude a deal, a rule that controls transformation of a selected e-original object into a transferable record, a rule that identifies at least one user able to authorize transfer of an interest in a transferable record; and

25 validating the owner's right to act with respect to the deal.